Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte JONG-BAE PARK

Appeal No. 1998-1088
Application No. 08/523,809

HEARD: March 7, 2001

Before FLEMING, RUGGIERO, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 1 and 3-5. We reverse.

BACKGROUND

The invention at issue in this appeal relates to projector screens. Devices such as flight simulators, traffic signal lights, and video monitors employ a projector that generates an image on a projector screen. More specifically,

light from an image source behind the screen is projected along a projection axis to the front of the screen. When there are many viewers, the horizontal viewing angle must be large to allow them all to see a bright image. Also, a large horizontal viewing angle permits viewers to be situated somewhere other than directly in front of the screen.

A conventional projector screen features a Fresnel lens that collimates light received from and magnified by a projection lens. In front of the Fresnel lens, parallel lenticular lenses form a lenticular lens system. The lenticular lenses form an image by spreading the collimated light. A projection panel is positioned on the viewing side of the lenticular system. Between the rear of the panel and the front of the lenticular lenses, projecting parts absorb part of the light spread from the lenticular lenses. The projecting parts comprise black stripes painted between adjacent lenticular lenses and extend outwardly from the surface of the lenticular system. Such extension limits the light-scattering angle of the individual lenticular lenses, thereby restricting the horizontal viewing angle.

The appellant's projector screen also features a Fresnel lens, lenticular lenses, and a protection panel. Projecting parts of a predetermined height are formed on the rear side of the panel facing the lenticular lenses. On the tip of each projecting part, a black stripe absorbs light. The height of the projecting parts is lower than that of a convex surface of the lenticular lenses. In other words, the convex surfaces of the lenticular lenses extend in the viewer's direction beyond the black stripes. Because the light-spreading angle is not unduly limited, the horizontal viewing angle is wider that of the conventional projector screen.

Claim 1, which is representative for our purposes, follows:

> 1. A projector screen comprising:
>
> a Fresnel lens for collimating incident light from a projection lens equipped in a light projection apparatus;
>
> a lenticular lens system comprising a plurality of constituent lenses, extending in parallel with respect to one another, for forming and spreading an image from the collimating light by said Fresnel lens; and

a screen protection panel disposed adjacent said lenticular lens system,

wherein said screen protection panel is equipped with a light-absorbing means for absorbing light spread by said lenticular lens system, and

further comprising a projecting part formed at a predetermined height on the side of said screen protection panel that faces said lenticular lens system, and wherein said light absorbing means comprises a darkened stripe formed on said projecting part.

Besides the appellant's admitted prior art (AAPA), the reference relied on in rejecting the claims follows:

Takuma et al. (Takuma) 5,448,401 Sep. 5, 1995
filed Dec. 21, 1993.

Claims 1 and 3-5 stand rejected under 35 U.S.C. § 103(a) as obvious over AAPA in view of Takuma. Rather than repeat the arguments of the appellant or examiner in toto, we refer the reader to the briefs and answer for the respective details thereof.

OPINION

In deciding this appeal, we considered the subject matter on appeal and the rejection advanced by the examiner.

Furthermore, we duly considered the arguments and evidence of the appellant and examiner. After considering the record, we are persuaded that the examiner erred in rejecting claims 1 and 3-5. Accordingly, we reverse.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

> In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

With these principles in mind, we consider the examiner's rejection and the appellant's argument.

The examiner makes the following allegation.

> [A]s one of ordinary skill in the art views the admitted prior art of Figure 4, the figure itself suggests a projection screen unit which includes a lenticular lens system and a screen protection

> panel. This figure not only suggests printing black stripes 12a on the screen protection panel 13 by its appearance, but could even be considered a teaching of the printing of the black stripes on the screen protection panel.

(Examiner's Answer at 5.) The appellant argues, "there is still no teaching or suggestion of placing a light-absorbing means in the form of a darkened stripe directly on the screen protection panel." (Appeal Br. at 11.)

Claims 1 and 3-5 specify in pertinent part the following limitations: "a screen protection panel disposed adjacent said lenticular lens system, wherein said screen protection panel is equipped with a light-absorbing means for absorbing light spread by said lenticular lens system ...." Accordingly, the limitations require a light-absorbing means formed on a screen protection panel that is lenticular lens system.

The examiner fails to show a suggestion of the limitations in the prior art. "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." Para-Ordnance Mfg. v. SGS Importers Int'l, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239

(Fed. Cir. 1995), cert. denied, 519 U.S. 822 (1996)(citing W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)). "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."
In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) (citing In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991)). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." Id. at 1266, 23 USPQ2d at 1784 (citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)).

Here, although AAPA teaches that "projecting part 12a ... is formed for absorbing part of light spread from a convex surface of the individual lenticular lenses 12," (Spec. at 3), and a "screen protection panel 13 of an acrylic material," (id.), the projecting part is not formed on the screen

protection panel. To the contrary, the projecting part is formed "between the rear side of screen protection panel 13 and the front side of the lenticular lens system .... Projecting part 12a is formed by black stripes 12b painted with an opaque ink ... formed between adjacent lenticular lenses forming the lens system on the tip of projecting part 12a." (Id.) More specifically, Figure 3 shows that the black stripes are formed on the lenticular lenses rather than on the protection screen. Relying on Takuma merely to "disclose[] a lenticular lens system wherein the convex surfaces extend further towards the viewing side of the projection system than the black stripes," (Examiner's Answer at 5), the examiner fails to allege, let alone show, that the addition of the reference cures the deficiency of AAPA.

Because AAPA's black stripes are formed on its lenticular lenses rather than on its protection screen, we are not persuaded that teachings from the applied prior art would appear to have suggested the claimed limitations of "a screen protection panel disposed adjacent said lenticular lens system, wherein said screen protection panel is equipped with

a light-absorbing means for absorbing light spread by said lenticular lens system ...." Therefore, we reverse the rejection of claims 1 and 3-5 as obvious over AAPA in view of Takuma.

CONCLUSION

In summary, the rejection of claims 1 and 3-5 under 35 U.S.C. § 103(a) is reversed.

REVERSED

MICHAEL R. FLEMING Administrative Patent Judge	)	
JOSEPH F. RUGGIERO Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
LANCE LEONARD BARRY Administrative Patent Judge	)	

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